



LAST WEEK FEATURED "BARGAIN DAYS" FOR Y-12ERS who received their fine individual safety awards for helping the plant establish its 25th Union Carbide Safety Award Period. This picture was taken at the West Portal "store" operated by the Safety Department as the awards were handed out to long lines of employees for two days.



EASY LAWN SPRINKLING this summer is the aim of James Chapman, TW Shops, as he is handed a lawn sprinkler as his individual safety award by Safety Engineer E. G. Richardson.



PRESIDING AT THE WEST PORTAL "COUNTRY STORE" of the Safety Department and handing out awards is E. G. "Sonny" Richardson, in window. In the center is J. A. Lane, TW Shops, picking up the wood plane he chose as his award. At left is James Shelton, of the same department, ready to get the lawn sprinkler he selected as his individual safety prize.

Ridge Hobby Show Slated March 12

**Ninth Annual Affair
Set For Ridge Hall**

The Ninth Annual Oak Ridge Hobby Show will be held on Saturday, March 12, it has been announced by the Oak Ridge Recreation Department, sponsors of the affair. The event will be staged in the Ridge Recreation Hall from 11 a.m. to 8 p.m., and numerous Y-12ers are expected to have entries in the competition.

Entry blanks for the hobby show may be obtained at the Y-12 Recreation Office, Room 132-A, Bldg. 9704-2; the Oak Ridge Recreation Department, Room 142, Municipal Building; Ridge Hall or the Oak Ridge Library.

The deadline for having the entry blanks in to the Recreation Department, Management Services, Inc., P.O. Box 6, Oak Ridge, is by Saturday, March 5.

The hobby show has brought out some unique entries in past years that have been interesting for spectators. Among the divisions in which entries may be filed are handicrafts, models, collections, graphic arts, mechanical and technical, and others.

COFFEE BREAKS COSTLY

Coffee breaks really represent a substantial expense to industry. A New England magazine recently estimated that when a purchaser is buying a home that requires six workers 100 days to build and each man takes a 15-minute daily coffee break, the cost will be an additional \$570.

\$79,000,000 Spent On Research, Development By UCC In 1959 To Expand Laboratory Work

**Corporation Now Has 26 Major Centers Staffed
With Scientists For Full Exploratory Programs**

Union Carbide Corporation's expenditures for research and development in 1959 amounted to \$79,000,000 compared with expenditures of approximately \$71,000,000 in 1958, according to the Corporation's annual report just mailed to stockholders. The Corporation now has 26 major research and development laboratories staffed with several thousand technically trained employees. These laboratories are carrying on full programs of exploratory and fundamental research, as well as applied research and process and product development work, in almost every field of physical science and mathematics.

Big Center At South Charleston

One of the new research facilities completed by Union Carbide in 1959 was a new technical center at South Charleston, W. Va. The 12 buildings that comprise these new research and development laboratories house 1,000 technical employees, of whom 160 have Ph. D. degrees. Experimental work there is largely devoted to the fields of synthetic organic chemicals and resins, hydrocarbon gases and liquids, and textile fibers.

Another new research facility that began functioning late in 1959 was a chemicals technical service laboratory at the Corporation's Westchester County property at Eastview, near Tarrytown, N.Y. This laboratory will help solve

customers' problems and conduct application research on new products. Also at Eastview, construction was started on a building to house the Union Carbide Research Institute, a basic research activity of the Corporation.

Project Near Completion

Three buildings of Union Carbide's new nuclear and ore research laboratories in Sterling Forest near Tuxedo, N.Y., were occupied late in the year. A nuclear research reactor and an associated laboratory for radiochemical research, still under construction, are scheduled for completion during 1960.

A major research accomplishment in 1959 was the development of methods and equipment for using liquid nitrogen in freezing, storing, and subsequent thawing of biological materials, such as blood and bone marrow. Techniques are being developed in co-operation with the Office of Naval Research. The ability to achieve indefinite storage of blood would mean that rare blood types could be collected and preserved in quantity and that every blood type could be stored in sufficient volume to meet catastrophes. Union Carbide scientists also are conducting research on the biological effects of synthetic atmospheres on all forms of life. This research could have a far-reaching effect in varied fields, ranging from the control of plant

Continued on Page 4

Safety Record Of Union Carbide Best In History—Helped By Y-12

**Nuclear Company Paced By Y-12 1959 Mark;
UCNC Figures Are Lower Than Corporation**

The corporation-wide safety record of Union Carbide Corporation for 1959, showing a frequency mark of 2.16, is the best in the history of UCC, according to the annual safety report of the organization. (The frequency rate is the number of disabling injuries for each 1,000,000 hours of plant operations.)

Contributing substantially to the fine UCC record is the safety mark established last year by the Oak Ridge and Paducah facilities of the Union Carbide Nuclear Company, which posted a frequency record of 1.19. This 1.19 rate is 45 per cent lower than the 1959 UCC rate of 2.16—and the 1959 mark for the Y-12 Plant, Oak Ridge Gaseous Diffusion Plant, Paducah Plant and the Oak Ridge National Laboratory is 31 per cent better than the 1958 figures posted by the four UCNC units.

Y-12 Frequency Rate 0.93

Pacing the UCNC safety record last year was the Y-12 Plant with its extremely low frequency rate of 0.93, the second lowest in the history of the plant. This mark was 24 per cent below the average for the two previous years.

The ORGDP and Paducah plants also showed an outstanding improvement in their 1959 records as compared to the previous year. The ORGDP had a reduction of 57 per cent while Paducah had a 45 per cent reduction. The ORNL figures for 1959 also were held commendable.

During 1959 the Y-12 Plant had 11 disabling injuries during 11,848,105 man-hours worked, for its 0.93 frequency rate. ORGDP had nine injuries in 7,845,805 hours of operation with a frequency rate of 1.13. ORNL also had nine injuries in 6,232,286 hours of operations and a frequency rate of 1.44 while Paducah had six disabling mishaps in 3,480,484 hours of work for a 1.72 rate.

UCNC Had Most Hours

The entire Union Carbide Nuclear Company safety record for 1959, including the mining operations in the West, showed a frequency rate of 1.37. This figure enabled UCNC to place seventh in the 15 groups cited in the UCC annual report. UCNC had 32,145,114 hours of operations for tops in the corporation with Union Carbide Chemicals Company second with 30,665,576 hours. UCC as a whole had 140,736,459 man-hours of work posted during last year.

The UCC safety report for 1959 says "the most significant progress made is indicated in the long-range safety program developed during the year by the UCC General Safety Committee and the UCC Safety Division. This program, which we feel will result in significant future progress, is based on utilization of comprehensive . . . reports and practical training programs."

In the Y-12 Plant, the high standard of accident-prevention is being continued with a mark of 3,000,000 hours of plant operations without a disabling injury close at hand. The Y-12 Plant has not had a disabling injury so far in 1960, the last such injury being recorded on December 10, 1959.

Of course, the Y-12 goal is the most possible number of accident-free hours of operations—not only for the sake of the statistical record but mostly for the continued good health and happiness of its employees resulting from the lack of injuries.

SAFETY SCOREBOARD

**The Y-12 Plant Has
Operated
80 Days Or
2,528,000 Man-Hours
(Unofficial Estimate)
Without A Disabling
Injury
Through February 28
Phone 7755
For Daily Report
On Accident-Free Hours**

Lubrication Engineers To Meet At Kingsport

**Hydraulic Fluids Topic;
Y-12er Is Nominated**

An interesting meeting and election of officers has been set by the Kingsport Section of the American Society of Lubrication Engineers for Friday night of this week, March 4. The meeting will be at the Skobey Restaurant at Kingsport with dinner to be served at 7:30 p.m. and the business meeting to follow at 8:30 p.m. A number of Y-12ers and other Oak Ridge members of the organization are planning to attend the session.

Tell Martin, of the Y-12 Mechanical Inspection Department, is vice chairman of the section. He has been nominated for chairman of the group in the election of officers.

Guest speaker at the meeting will be John Norton Smith, manager of the hydraulic fluids and transmissions department of the E. F. Houghton and Co. firm, Philadelphia, Pa. His subject will be "Compatibility of Seals, Packings and Hydraulic Fluids." He will discuss some of the new hydraulic fluids now on the market, an important question to all lubrication engineers.

Physics Seminar To Hear Discussion By ORNL Man

A talk by J. Neufeld, Oak Ridge National Laboratory Physics Division, will feature the divisional seminar meeting slated for Friday afternoon of this week, March 4. The meeting will be at 3:15 o'clock in the auditorium of Bldg. 4500, ORNL. The discussion subject will be "Coherent Acceleration," a report on a conversation with V. I. Veksler on November 16, 1959.

INDIANS HOPE TO SAVE LAND

The Northern Cheyenne Indians, of Montana, have appealed to the United States Department of the Interior to approve a plan by which the group hopes to save their reservation. The Cheyenne tribe wants to buy the land back from individual Cheyennes among whom it was divided in 1926.

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Science Fair Honors Won By Y-12er's Son



Benic P. Hampton, Jr.

Heading for competition in the Southern Appalachian Science Fair in the elementary school division is young Benic P. Hampton, Jr., whose father is with the Y-12 Physical Testing Department of the Technical Division. He was a recent winner of first place in the physical sciences division in the Smithwood (Knox County) Elementary School Science Fair.

Young Hampton was the only boy among the four winners in the seventh and eighth grades in the physical and biological sciences classes. About 200 entries were viewed by the judges.

Benny's project was "Cycloid and Falling Bodies." In the exhibit he sought to show a problem in physics to demonstrate that the path of a cycloid is the path of swiftest descent of a falling body from one given point to another.

In the Southern Appalachian Science Fair, to be held at the University of Tennessee March 31, April 1 and 2, young Hampton will be in the Junior Academy of Science division. In a preliminary competition at U-T last fall before the Junior Academy of Science competition in Nashville, he placed first, but was among the trailing contestants in Nashville. However, by winning first place in the Smithwood fair, he gets another chance for higher honors.

DON'T LET STRAIN



STAIN YOUR
SAFETY RECORD!



With the dire weather predictions of last Thursday morning ringing in his ears and fearing the worst, the Prop. & Gen. Mgr. of Strictly Co(r)nfidential figured out his own—and still corny—weather forecast: "Chile today—hot tamale." With that hot one out of the way, let's see who's next—

MECHANICAL OPERATIONS

The Beta Four Machine Shop just about wore out its mink mat of welcome last week, as it was strewn out for G. A. Adams, C. K. Endsley, R. E. George, F. M. Barnes, K. D. Henderson, B. J. Hilbrandt, C. S. Jones, C. R. Kerr, R. J. Mustin, H. B. Presley, H. L. Smith, G. H. Steincipher and J. O. Parks . . . N. E. Hoffman was warmly welcomed back last week after taking several days off because of illness in his family . . . The departmental sick roster lists M. Jennings, W. L. Gaston, L. K. Phillips and P. A. Fritts—so rapid recovery wishes go to all of 'em.

Throng of Y-12ers have congratulated fellow employees on joining the "Proud Pop's Club"—but the distinction of joining a "Big Brother's Club" is even a more unique reason for extending congratulations. However, it was achieved last week by Larry Underdown, of the Alloy Shop, when a 10-pound, 10-ounce son was born to his parents, Mr. and Mrs. Robert Underdown, of Athens, Tenn.

FINANCE AND MATERIALS

This charming and talented young lady is Rachel Jinks, daughter of A. T. Jinks, of Stores and formerly of the Z Area Department of Mechanical Operations. Miss Jinks was elected as president of the Pi Beta Phi sorority at University of Tennessee on February 15. During the past two summers she worked as a summer employee with the Health Physics group.

Accounting and Budget was very glad to see Harold Ratjen stick his head in the door last week after being on the puny list for more than a month with more ailments than the proverbial Carter had oats. . . . T. A. Williams also came back after a brief battle with flu or something.

F&M Administration folks and a host of other friends of Corum Scott are wishing him the best—he underwent surgery in Ft. Sanders Presbyterian Hospital in Knoxville last week.

MAINTENANCE

With a warm "Howdy, folks," Mechanical Maintenance last week welcomed three transfers from other departments—E. Hensley, D. L. McCord and J. W. Mitts . . . Congratulations and best wishes for perpetual happiness are extended Mary Williams and C. A. Pickens, her formerly of the department and now with Research Services, on their marriage in Chattanooga on Saturday, February 20 . . . Sympathy is extended B. R. Disney, whose grandfather died recently in Kentucky.

It took a brave soul to even contemplate going fishing last week—but Virgil Lovett, the champion angler of Electrical Maintenance, told pals he was going to brave whatever the weather would be and journey to Lone Mountain and see what the finny families in that location wanted for lunch—also planning to go along were Ed Poe, Sam King and Melvin Whited . . . On the ailing list and receiving get well wishes last week were Babs Stooksbury, J. W. Rule, Jim Miller, C. F. Huskey, G. D. Adams, Bill Wana-maker and H. A. Garrett, the latter being in Ft. Sanders Presbyterian Hospital in Knoxville . . . W. H. Dial just oozed away to parts un-

known for his vacation . . . A hearty welcome was extended last week to A. E. Morton, transferred from Research Services.

Welcomed back last week to Research Services after long illnesses were W. J. Dawson, R. L. Smithers, G. D. DeLozier and Fletcher DeFord . . . Get well wishes are rushed to H. Sadler, on a return trip to hospitalization . . . Condolences are extended P. R. Shultz, whose grandmother died several days ago; and likewise to E. D. Seagle, who lost his father, James H. Seagle, 79, of Knoxville, last week. Another Y-12 son is J. P. Seagle, of Enriched Uranium Recovery in the Chemical Operations Division; and Charles McAmis, of the General Machine Shop, of Mechanical Operations, is a son-in-law of James H. Seagle.

SHIFT SUPERINTENDENTS AND UTILITIES

Welcomed to the fold of the Shift Superintendents group is Clara Smith.

Utilities is happy to know that C. A. Cox and J. A. McLain have been released from hospitalization and hope they will be back soon.

CHEMICAL OPERATIONS

This blase young gent is Stephen Flynt Wilder, whose Proud Pop, Bob Wilder, of Enriched Uranium



Stephen Wilder

Recovery, snapped this picture while young Stevie was trying to find out just what this old world was about at the ripe old age of one hour. The young fellow was born last week and weighed in at a bouncing eight pounds. Pop Bob reported mother and baby doing just fine—now pals are betting as to whether Bob gets the task of giving Stevie his 2 a.m. bottle, and it was five, three and out that he would. Mrs. Wilder is the former Miss Edna Jean Flynt. . . . A big "get well quick" wish goes to the ailing folks in the department—B. I. V. Bailey, C. E. Legg, M. B. Potter and R. J. Luck. . . . Condolences are extended Lennie Jeffreys, whose father-in-law died recently.

ENGINEERING

Mechanical Engineering last week welcomed Fred Jeffers into the ranks. Fred transferred from Engineering Records . . . The flu persists in plaguing the M.E.s—recent victims were Nora Moss and Spence Ferguson . . . The department was happy to have Russ Hensley back at the old stand after a siege with the sinuses . . . Beeman Fox closes this blurb with a word of caution to drivers that parking a pick-up truck can become more complicated than driving one.

INDUSTRIAL RELATIONS

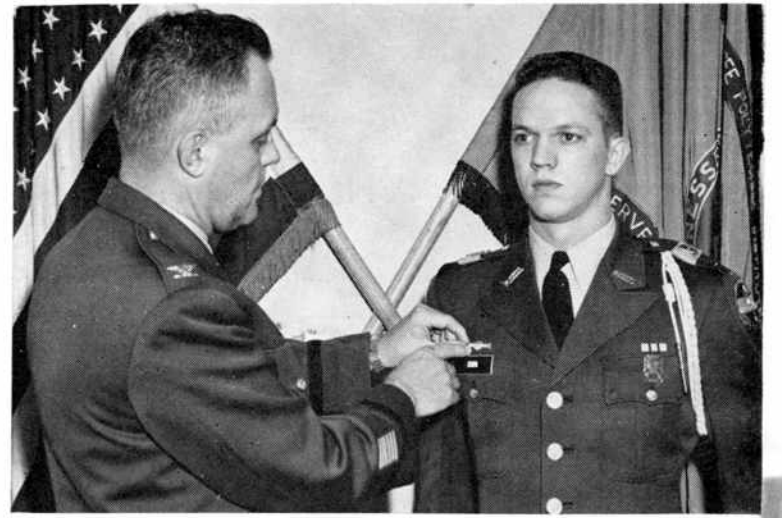
The flu bug has flew from the persons of Guards R. L. Carson, J. E. Morgan and G. C. Gipson and so all are back with the Boys in Blue and Gray of the Fire and Guard Department . . . Guard L. A. Litton also was welcomed back last week after recovering from injuries sustained in an automobile accident.

The Cafeteria sends its best rapid recovery wishes to Vena Mae Summitt, who is in St. Mary's Hospital in Knoxville for surgery . . . Meanwhile, Madeline Tackett was welcomed back to the group after her bout with the flu.

Employment and such folks in the west end of Bldg. 9704-2 last week welcomed Joe Riordan back to the premises after a spell of hospital life.

TECHNICAL

The G. Washington birthday holiday was observed by R. E. Crabtree, of the Bio-Analysis Laboratory of Special Testing, and family down at Ten Mile and Athens, Tenn.



CADET MAJ. SAMUEL D. KING, whose father is Samuel King, a foreman in the Y-12 Electrical Maintenance Department, is shown above receiving a Distinguished Military Student medal at Tennessee Polytechnic Institute, Cookeville, recently. Making the presentation is Col. Gordon A. Miller, professor of military science and tactics at TPI. Young King was one of 13 ROTC seniors at TPI to receive the honor.

Son Of Y-12er Plans Army Career After TPI Graduation

Showing particular aptitude in his studies of military affairs, a son of a Y-12er has chosen an army career after graduating from Tennessee Polytechnic Institute at Cookeville. He is Samuel D. King, son of Foreman

Samuel King, Electrical Maintenance, and now a senior at TPI.

Young King is cadet major of the Reserve Officers Training Corps detachment at TPI. He recently was one of 13 TPI seniors in the ROTC to be selected as Distinguished Military Students and was presented with a medal by Col. Gordon A. Miller, professor of military science and tactics at the school.

The 13 cadets receiving the Distinguished Military Student medal were selected from the top 25 per cent of TPI senior ROTC students. They received their recognition on the basis of achievement in military science and other phases of academic life.

Cadet Maj. King is an industrial technology major at TPI.

Back in 1959 he achieved mention in The Bulletin when a picture of him receiving congratulations on leading a cadet company that headed the inaugural parade for Gov. Buford Ellington in Nashville. The company was known as the Rebel Rifles.

Young King expects to apply for a commission as a second lieutenant in the regular army when he completes his studies at TPI. He has a B average in his studies at the Cookeville institution.



Get well wishes are extended the following Y-12ers who were patients last week in the Oak Ridge Hospital:

Raymond Ledford, Fire and Guard; Joe Mitchell, Buildings and Grounds; J. H. Oldham, Tool Grinding; J. E. Herrin, V. W. Arms, E. W. Beachly and Hugh Sadler, Research Services; R. L. Robertson, Production Inspection.

AEP Announces 38 Courses For 1960 Spring Quarter

The Oak Ridge Adult Education Program has announced subjects in 38 courses slated for the AEP Spring Quarter beginning March 21. Registration runs from March 14 through March 23 at the Oak Ridge High School with office hours being from 1 p.m. to 4 p.m. and 6:30 p.m. to 9 p.m. on Mondays through Wednesdays.

The courses for the Spring Quarter include two in Russian and one in Spanish. Others include mathematics, business topics, shorthand and typing.

Y-12ers wanting further information on the courses offered may obtain it from the Benefit Plans Office, Bldg. 9704-2, plant phone 7382.

Y-12ers With 15, 10 Years Company Service

Congratulations to the Y-12 employee listed below who will complete 10 years of Company Service within the next few days. No Y-12er will observe a 15th employment anniversary within the next week.

10 YEARS

Mary J. Thompson, Tabulation Services, March 8.

MANY DRIVERS LICENSED

A recent survey revealed that there are about 80,000,000 licensed automobile drivers in the United States.

LEN HART, NELL JAGO TO DEFEND PIN CROWNS

'Family Night' Is Observed In Mixed League Bowling Tilts

Jagos And Gillihans Lead Toppers, 'Tucks To Triumphs With Fine Scoring On Alleys

It really was "family night" in the Mixed League of Y-12 men and women bowlers last Thursday night at the Ark Lanes. Two husband and wife teams monopolized all individual scoring honors with Bob and Nell

Golf Meetings To Form Leagues

Elections, Playing Plans To Be Made

The announcement last week that organizational meetings have been planned for golf leagues to accommodate Y-12ers in Oak Ridge and nearby communities apparently has flushed the winter hibernation they may have been enjoying. From the resultant chatter, indications point to another banner session for the golfers in various leagues that have drawn Y-12 players in previous seasons.

The organizational meetings will see officers elected for the coming season as well as the making of plans for seasonal play. In the field last season were two leagues at Oak Ridge, one at Lenoir City, one at the Whittle Springs course in Knoxville and another at Harriman for players from all three Company facilities in Oak Ridge.

The schedule of meetings follows:

From Y-12 and Oak Ridge National Laboratory golfers living in the Harriman, Rockwood and Kingston areas, 7:30 o'clock Thursday night, March 10, at the Hut Cafeteria, 120 North Kentucky Ave., Kingston. League to play at Harriman.

For Y-12 golfers in Oak Ridge; 1 o'clock Tuesday afternoon, March 15, in Conference Room No. 221, second floor, Bldg. 9704-2. One or more leagues to play at Oak Ridge.

For Y-12 golfers in the Lenoir City area; 1 o'clock Tuesday afternoon, March 22, in Conference Room No. 212, second floor Bldg. 9704-2. League to play at Lenoir City with entrants from there and nearby points.

For Y-12ers playing at the Whittle Springs course in Knoxville; 1 o'clock Thursday afternoon, March 24, in Conference Room No. 212, second floor Bldg. 9704-2. For all Knoxville players.

Y-12 Riflemen Beat Lab By Two Points

The dead-eye Y-12 rifle team took both scratch and handicap decisions from the Oak Ridge National Laboratory gunmen February 22 to increase their lead in the Oak Ridge Sportsmen's Association Winter League to four points. The Y-12ers are the only team to defeat the Labsters this season. The Y-12 team scored a scratch win of 1396 to 1369 and handicap margin of 1448.212 to 1438.513.

In individual firing Ed Brady led the victors with 285 out of a possible 300. He was followed by Dave Dewalt 282, Jack Huff 281, Otey Cottrell 278 and Bob Powers 270. In handicap scoring for Y-12 it was Brady 292.341, Harvey Coppock 290.172, Phil Vogelgesang 289.918, Powers 289.014 and Cottrell 288.767. For ORNL A. Abbatello tied Brady for high scratch score with 285.

League standing follows:

Team	W	L
Y-12	27	3
ORNL	23	7
ORGDP	10	20
Independents	0	30

Brown's Sizzling 662 Series Leads Wolves To Victory

Classic Loop Leaders Whitewash Tigers; Bumpers Take Second

Led by J. D. Brown's season's high 662 scratch series, the rampaging Wolves took their second straight whitewash victory of four points in the Classic League of Y-12 bowlers last Thursday night with the toothless Tigers being the victims. The Bumpers climbed into second place, five points back of the lead, by pasting the Eight Balls for three as the Markers dropped back to third after being stung by the Wasps for a four-point shutout.

In other clashes the Smelters climbed out of the cellar by blanking the first half of the season winners, the Swingsters. Three-point wins were posted by the rising Rippers over the Rebels and by the Playboys over the Sportsmen. The Screwballs and Cubs tied up at two points each as did the Has Beens and All Stars.

Another season's high scoring mark was set by J. Davis, Wasps, with a towering 727 handicap series. Rudy Pletz, Has Beens, had the best scratch game of the night with 243 and Bob Jago, Markers, rolled a 268 handicap game for high of the night. The Wasps' 3200 handicap series was tops as was the 1099 handicap game by the Has Beens.

League standing follows:

Team	W	L
Wolves	27	5
Bumpers	22	10
Markers	19	13
Rippers	18	14
Playboys	18	14
Swingsters	17 1/2	14 1/2
Screwballs	17	15
Tigers	15	17
Cubs	14 1/2	17 1/2
Rebels	14	18
Sportsmen	13	19
All Stars	13	19
Wasps	13	19
Has Beens	12	20
Smelters	12	20
Eight Balls	11	21

To make a long story short—there's nothing like having the boss walk in.



Y-12 Bowling Tourney Draws Large Field Of Contestants

Event Set For Saturday And Sunday At Ark; Men's 1959 Champion Seeks Sixth Title In Row

With both defending Y-12 Plant bowling champions of 1959 back to defend their titles and a formidable entry list all down the line, the 1960 Y-12 Bowling Tournament will find super-duper pin toppling engaged in over the coming week end of Saturday and Sunday, March 5 and 6, at the Ark Bowling Lanes. Entries in most of the classes this year top the figures of 1959.

The defending titlists back to face determined attacks on their honors are Len Hart and Nell Jago. Hart is out after his sixth straight Y-12 Plant championship. In last year's event he posted a fine 1786 all events scratch score to gain the crown. Mrs. Jago came through with a 1318 all events scratch to win her crown. She also will defend the women's doubles crown along with Shirley Brown, a teammate on the Toppers of the Mixed League. They won both scratch and handicap honors last year with scores of 898 and 1103.

31 Men's Teams Entered

There are 31 five-man teams entered in this year's tournament as compared to 26 in 1958. A total of 68 two-man doubles teams will compete this year as against 60 in 1959. In men's singles there will be head-on conflict between 129 entrants this year compared to 105 last year. The women's singles competition has drawn 15 contestants this year with only 12 in the field last year. There will be eight teams of women's doubles rolling this year as against six in 1959. The number of mixed doubles teams are the same this year as last—16.

The Sportsmen team of the Classic League are the defending champions, as they led the field in both scratch and handicap firing last year with marks of 2620 and 3025.

Other 1959 Champs Listed

Other champions of the 1959 tournament and their scores were Len Hart-Hubert Trippe, men's doubles, 1195 scratch; Mrs. Jago-J. C. Bryan, mixed doubles, 998 scratch; Louise Eubanks, women's singles, 421 scratch and 565 handicap; and R. P. Wallace, high single game for men in the tournament of 258. The men's singles champion of 1959 was the late Elmore Koons, who had a scratch series score of 595.

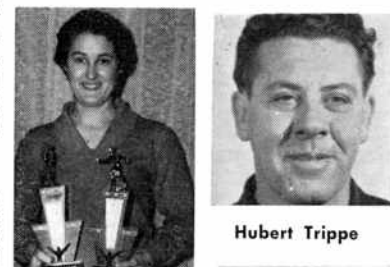
Teams entered from the Classic League this year are the Swingsters, Smelters, Sportsmen, Has Beens, All Stars, Rippers, Playboys, Wolves, Wasps, Markers, Screwballs, Rebels, Cubs and Bumpers. From the C League are Murderer's Row, D Shift, Engineers, Par Busters, Chillers, IBMs, Sunflowers, Big Five and Knot Heads. Bush League repre-

SOME 1959 CHAMPS



Nell Jago

Shirley Brown



Louise Eubanks

Hubert Trippe



J. C. Bryan

R. P. Wallace

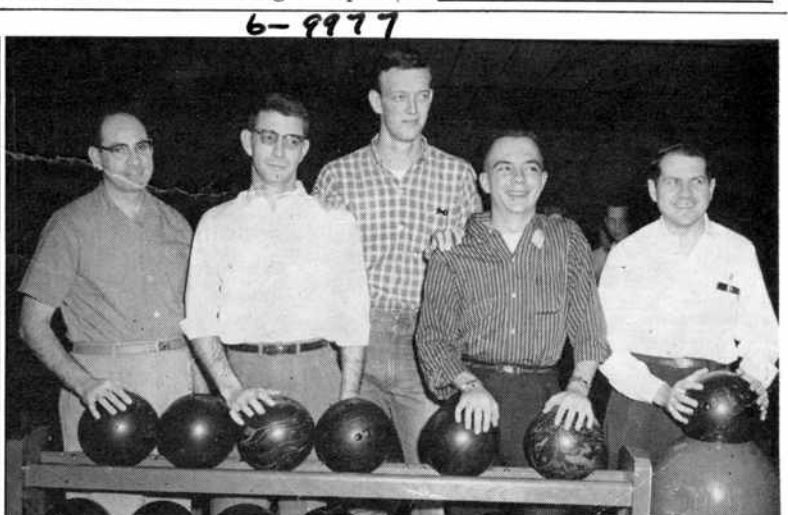
sentatives will be the Lucky Five, Rollniks, Alley Gators, Hi Balls, Alley Cats and Beavers. Two independent teams — the Kingston Five, composed of Y-12ers from the Kingston section; and the Depleteds, an independent team with bowlers from several Y-12 leagues, as members.

Men's team and mixed doubles will be on the tournament Saturday with singles and doubles for both men and women to be rolled on Sunday.

Removal of classified documents to a private residence for work purposes is strictly prohibited.



THESE TWO STRONG TEAMS IN THE BUSH LEAGUE OF Y-12 bowlers have been troublesome foes for all opposition since the start of the season and still are in the fight for second half honors in the circuit. At left are the Nine Pins, bowlers from left being Capt. B. N. Hammer, Roger Downs, D. T. Littleton, Roy Huddleston



and Spence Ferguson. The Hi Balls are at right, squad members being Phil Breman, Capt. Jack Cox, Jack Cowan, Mike Galloway and J. C. Johnson. The Bush League and other loops of Y-12ers are enjoying particularly fine and closely-contested seasons on the alleys.

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Lab Demons Rout Reactors By 42 To 35 With Great Rally For Carbide Crown

Y-12ers Blow Big First Half Advantage; Tournament For Loop Teams Is Scheduled

The Y-12 Reactors blew an 11-point lead in the last half to drop a 42 to 35 decision to the Oak Ridge Gaseous Diffusion Plant Lab Demons for the championship of the Carbide Basketball League last Thursday night. The Y-12ers held a 23 to 12 advantage at halftime, but grew as cold as an igloo after the intermission, scoring only 12 points while the Demons were just that around the hoops—scoring 30 points.

Ceiling Fell In

The Reactors bounced away to a 13-5 edge at the first rest stop and with a 10-7 margin in the second period appeared to be home as safe as a home run hit out of a baseball park. Then the ceiling fell in—and that was that for the season's championship.

However, the Reactors have one more chance for glory as a single elimination tournament has been scheduled as a post-season feature. This tournament was slated to get underway on Monday night of this week with two games. The Y-12 Ramblers were to meet the ORGDP D Shifters at 6:30 p.m. at the high school gymnasium and in the nightcap the Y-12 Hawks were slated to tackle the Cee Reds of ORGDP at 8:15 p.m.

Reactors Meet Hot Shots

The Reactors' first tournament tilt is set for tonight, Wednesday, March 2, against the ORGDP Hot Shots at 6:30 p.m. The Y-12 Beta Four quintet will play the winner of the Hawks-Cee Reds game at 8:15 p.m. The Y-12 Atoms meet the winner of the Ramblers-D Shift encounter next Monday night, March 7, while the Lab Demons get their first tournament clash at 7 p.m. tomorrow night, Thursday, March 3, at Robertsville Junior High School against the ORGDP All Stars. The semi-final and final games are to be scheduled later.

In the Reactor-Demon title clash the victors were led in scoring by Harris with 14, followed by McCall 10, Hale eight and Woy six. Lew Fitzgerald had 10 counters for the Reactors, Chandler nine and Forrester eight.

D Shift Beats Stars

In an all-ORGDP clash last week the D Shift five held off a rally by the All Stars for a 46 to 42 win. Smith paced the D Shifters with 20 points in a nip and tuck game played as though the teams were clashing for the loop crown. The final score was decided at the free throw line as the All Stars outscored D Shift in field goals by 19 to 16.

Line scores and final league standing follows:

Reactors	13	23	31	35
Lab Demons	5	12	27	42
All Stars	7	12	29	42
D Shift	6	19	30	46

FINAL LEAGUE STANDINGS

Team	W	L
Lab Demons	9	0
Reactors	8	1
All Stars	5	3
Hot Shots	5	3
Beta Four	4	4
Cee Reds	3	5
D Shift	3	5
Ramblers	2	6
Atoms	2	7
Hawks	1	9

REDS BUILDING LABORATORY

Russia is building a scientific center near Novosibirsk to provide accommodations for 60,000 scientists. They are working on nuclear physics and kinetic problems.

First Fish Rodeo Of Season Slated

Event Opens March 12, Will End On June 13

Entry blanks for the first Y-12 Fishing Rodeo of the year now are available for Y-12 anglers. The rodeo will get underway at 12:01 a.m. Saturday, March 12, and continue for three months until midnight on Monday, June 13.

The entry blanks may be obtained at the Recreation Department, Room 132-A, Bldg. 9704-2. Y-12ers are urged to keep some of the blanks on hand for any of their fishing forays to be ready if a "big 'un" is landed.

All entries in the rodeo must be submitted to the Recreation Department office not later than noon on Wednesday, June 15.

Fish eligible for prizes in the rodeo are largemouth, smallmouth and striped bass, walleye and sauger pike, crappie, bluegill, bream and trout. Fish must be taken on rod or cane pole and line. All fish entered must be caught in Tennessee waters.

Prizes of sportsmen's equipment will be awarded to first and second place winners in each division. Winners will be determined by weight. In case of ties, length and girth, in that order, will be considered in deciding the winner. No contestant will be eligible for more than one rodeo prize. However, any contestant may enter fish of as many eligible species as desired.

U.S. \$10,000 Bill Much Too Large; Can't Be Spent

The largest piece of American money is the \$10,000 bill. It bears the picture of Salmon P. Chase, secretary of the treasury under President Abraham Lincoln.

The \$10,000 bill is not a highly negotiable instrument. It won't buy a cigar nor a chinchilla. A store undoubtedly would want to check one of the bills if it were presented in payment for merchandise. Just about the only thing to do with a \$10,000 bill is to take it back to a bank.

That's just what happens. Each year the Federal Reserve Bank issues a number of \$10,000 bills, most of them just before Christmas. Usually, within a few days after New Year's they are all safely back in the bank.

Then there's the woman who calls her husband Hydromatic—he's shiftless.

\$79,000,000 Is Spent On UCC Research Work

Continued from Page 1
growth to sustaining astronauts in their exploration of space.

UCC Using New Tools Of Science

Union Carbide laboratories are using new tools of science as fast as they are developed. One laboratory, for instance, recently placed in operation a field ionization microscope with which it has been possible to study single atoms and molecules on a surface while a chemical reaction is occurring. Reactions of chemicals and plastics also are being studied by bombardment with electrons and with gamma rays having energies up to 2,000,000 volts. Two laboratories are carrying on experiments involving pressures in excess of 1,000,000 pounds per square inch. An arc image furnace designed by Union Carbide engineers has made possible the study of refractory materials at temperatures as high as 7,000 degrees Fahrenheit. New techniques such as magnetic resonance at ultrahigh radio frequencies are being used to probe the behavior of materials as they react.

Union Carbide's construction expenditures for the last 10 years have averaged over \$132,000,000 a year. In 1959, the Corporation spent \$136.6 million for new plants and equipment. These expenditures cover facilities in the United States, Puerto Rico, and Canada. It is expected that construction expenditures will increase appreciably in 1960, with the major portion being spent in the chemicals, plastics, and industrial gases groups.

More Projects Underway

Among the significant projects under construction in the United States during 1959 were chemicals facilities at Seadrift and Texas City, Tex.; peracetic acid facilities at Institute, W. Va.; a low-density polyethylene production unit at Whiting, Ind.; a new polyethylene film extrusion plant at Cartersville, Ga.; a large tonnage oxygen facility in the Monongahela River valley; an oxygen-nitrogen production plant at Pittsburg, Cal.; and a new uranium mill in the Gas Hills area of Wyoming.

Construction projects under way in Canada included a general expansion of the chemicals and plastics plant at Montreal East, Quebec, which will provide additional polyethylene capacity, and expansion of the Sault Sainte Marie, Ontario, oxygen plant.

Overseas Interests Growing

The overseas interests of Union Carbide, which now include some 50 affiliated manufacturing and mining companies located in many countries throughout the world, continued to grow at a rapid pace during 1959. Sales of the manufacturing companies have doubled within the last five years.

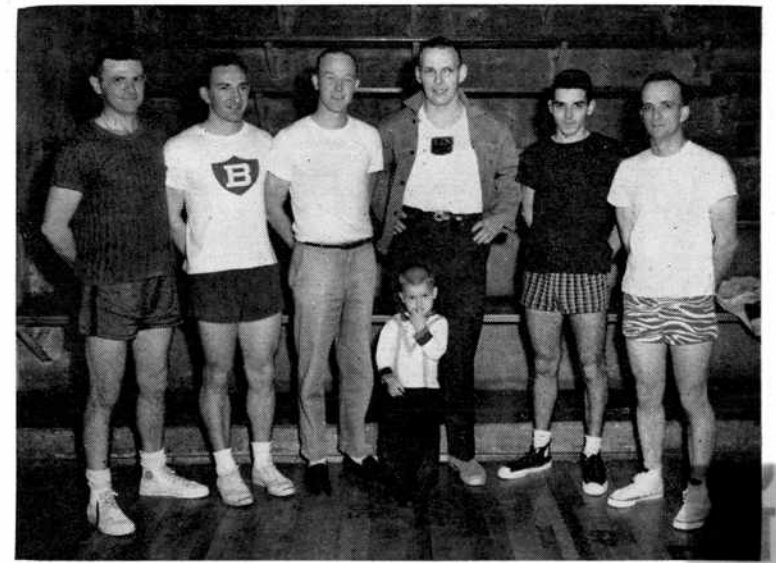
Expansion overseas has been spurred by the increased demand for petrochemicals. The most recent overseas chemicals installation completed by Union Carbide is a multi-million dollar plant at Ponce, Puerto Rico. The plant is operated by Union Carbide Caribe Inc., a consolidated subsidiary of Union Carbide. Its principal product is ethylene glycol, which will be sold to world markets for many important commercial uses. Two additional new plants for the production of chemicals and plastics are due for completion this year by affiliated companies in Italy and India. Major expansion of other plants are also scheduled for completion in 1960.

In 1959, nonconsolidated overseas companies affiliated with Union Carbide spent approximately \$28.6 million on new construction, as compared with \$29,000,000 in 1958. Expenditures are expected to be higher in 1960.

Continued Improvement Expected

As previously reported, Union Carbide's net income in 1959 increased 37 per cent to \$171,637,065 or \$5.70 a share. This compared with net income of \$124,936,845, or \$4.15 a share, in 1958.

Total sales for 1959 were \$1,-



VOLLEYBALL HAS PROVEN A POPULAR SPORT among Y-12ers during the last two years. Shown above is the Eagles team of Y-12 in the Carbide Volleyball League. From left are G. E. Cosgrove, R. T. Dryman, C. H. Crockett, Jim Gilcrest, Ray Williams and J. C. Anderson. The youngster in front is Mascot Kenny Anderson. Absent when picture was made were Capt. Lloyd Wyatt and Max Davis.

C AND BUSH LEAGUES IDLE FEBRUARY 22 TO OBSERVE HOLIDAY

Don't be poring over this page hoping to find results of bowling in the C and Bush Leagues of Y-12 keggers. These two loops, both slated to roll at the Ark Lanes on Monday night, February 22, took advantage of the Washington's Birthday holiday to rest up, swap Washingtonian yarns about their alley activities — bowling, of course, and to make plans for the next session, slated for February 29. The outcome of matches rolled on that date will be reported in The Bulletin next week.

Former Y-12 Man Prominently Cast By Kanawha Players

A former Y-12er who also is the son of a former Y-12er is making quite a name for himself in the field of amateur theatricals in Charleston, W. Va. The talented young thespian is Bob Barron and the father is Ray Barron, who was officer manager of the Y-12 Plant before he was transferred several years ago to the South Charleston Plant of the former Carbide and Carbon Chemicals Company.

Young Bob Barron began his dramatics career with the Oak Ridge Community Playhouse in 1949. After an Army enlistment, he took up the theater in earnest. He studied in New York and Hollywood and has had bit parts in television.

He now is connected with Radio Station WTIP in Charleston and is a leading member of the Kanawha Players, a Charleston dramatic group. He recently played the role of the Reverend Brown in "Inherit The Wind," a play based on the famous Scopes evolution trial in Dayton, Tenn.

343,824, an increase of 18 per cent over sales of \$1,296,532,373 in 1958. The chemicals group accounted for approximately 33 per cent of the total 1959 sales. The plastics group contributed approximately 22 per cent; the metals group, 18 per cent; the industrial gases group, 15 per cent; and the electrodes, carbons, and batteries group, 12 per cent.

The consolidated balance sheet showed total assets of \$1,632,250,370 in 1959, as compared with \$1,530,476,376 in 1958.

The outlook for 1960, the report stated, is for continued improvement in sales and earnings.

CULTURAL PACT SIGNED

According to an Associated Press dispatch from Amman, a cultural agreement for the exchange of books, films, teachers and archaeological literature has been signed by Jordon and Morocco.

Norris Tributary Gets Trout Eggs; Fingerlings Placed

White's Creek, a tributary of Norris Lake, on the Central Peninsula Wildlife Management Area, has just been planted with 50,000 rainbow trout eggs, according to Price Wilkins, Senior Biologist with the State Game and Fish Commission. The eggs, flown from Soaplake, Wash., were received in good order, and they were immediately transported to the White's Creek area. Placed in small screened trays the eggs were buried in beds of gravel in the swift flowing stream. Wilkins said that hatching should begin within two weeks.

As part of an experimental plan to supplement trout plantings in large impoundments this is the second planting of trout eggs in this same tributary. The first plantings, Wilkins stated, were made last year when 100,000 eggs were planted with good results. Of the initial placement of the tiny eggs an estimated hatch of 95 per cent was observed.

In addition to the trout eggs placed in the Norris Lake tributary some 25,000 fingerling rainbow were introduced into the lake last year, and another stocking of these small fish is planned for this season. All of the small fish planted will be marked by fin-clipping so that the two methods of stocking may be evaluated.

Any fisherman catching trout in Norris Lake may aid in this experimental trout program by reporting such catches to his local Game and Fish Officer. Wilkins said that every trout recovered and reported will help to determine the value of such stocking.

Sharpshooters Top Y-12 Pistol League

Going into the stretch drive, the Sharpshooters took two points from the Marksmen in most recent firing by the Y-12 Plant Pistol League to strengthen the victors' hold on first place. For the Sharpshooters Paul Williams edged out T. J. Bush by 253 to 246 in scratch firing and K. E. Smith's 284.880 handicap score also topped Bush's best effort for the Marksmen. The Experts and Masters broke even, Dave Alford scoring 254 scratch for the Masters against 249 for Tommy Swindell, Experts. E. C. Williams, Experts, had the best handicap score of 290.722.

League standing follows:

Team	W	L
Sharpshooters	16	4
Experts	9	11
Masters	9	11
Marksmen	6	14

Discuss classified work only on a "need to know" basis with properly cleared and authorized personnel.